

The History and recorded Distribution of *Coleophora wockeella* Zeller, 1849 (Lep.: Tineidae) with Notes on its Rearing from the Pre-hibernation Larva

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The recorded distribution of this species extends from Essex and Kent westwards through Surrey, Sussex, Isle of Wight, Dorset, Devon and Gloucestershire to Herefordshire. Though it is still not scarce locally in Surrey, its status elsewhere is uncertain, and it may now be extinct in a number of its former localities.

The sole foodplant of *wockeella* in Britain appears to be *Betonica officinalis* L. (*Stachys betonica* Benth.): Wood Betony, although Morris (1872) also gives "*Stachys hirta*" (now called *Stachys arvensis* L.): Field Woundwort and *Ranunculus ficaria* L.: Pilewort or Lesser Celandine. On the continent the foregoing are given, as well as *Genista tinctoria* L.: Dyer's Greenweed, *Ranunculus acris* L.: Common Meadow Buttercup and *Marrubium vulgare* L. White Horehound (Sorhagen, 1886 and Lhomme, 1951). Hering (1957) states that the feeding of *wockeella* on *Ranunculus* is an example of xenophagy.

Kent

The earliest reference to the occurrence of *wockella* in Britain that we have been able to trace in the literature is that of Stainton (1854), who states: "Two specimens were taken by Mr Weir, at Pembury a few years back. Last summer he bred a third from a dark brown slightly curved case he found attached to a leaf of *Genista tinctoria*, although there were no symptoms that the larva had fed upon that plant". The continental record of this foodplant (see above) suggests that it might, after all, have been feeding upon it. In a later reference Stainton (1859) gave Pembury and "near Canterbury" but without particulars. These appear to be the only two Kentish localities known, and though the species does not seem to have been noted at either since, there is no reason to doubt that it once occurred at both, and might in fact still do so.

Isle of Wight

Stainton (1860) records *wockeella* from the Isle of Wight, but without particulars.

E. R. Bankes (*Diary*) writing in the 1880's says that C. R. Digby found on May 16 and June 20 [cir. 1880] many larvae and a few pupae respectively, on Freshwater Down. Bankes and Digby then visited the locality on May 18, 1885, and between them got 62 larvae, mostly full-fed. Bankes went again on May 24-25, 1886, and at the same place, "on the down at Freshwater Gate, Isle of Wight", took a further 120 larvae, of which he says "some are very late and quite small still".

Both men bred the moth abundantly from these collectings.

So far as we are aware, *wockeella* has not been seen since in the Island, and, in the hopes of rediscovering it there, in late May 1969, R. W. Uffen and J. M. C.-H. visited Tennyson Down, Freshwater, where one suspects Bankes and Digby got theirs, but failed to see any sign of it, though the foodplant was there in abundance.

Gloucestershire and Devon

There are old records of *wockeella* from these two counties. T. B. Fletcher and C. G. Clutterbuck (1941) have "The Gully, Durdham Down" by Grigg (an old Bristol collector) on the authority of V. R. Perkins.

Meyrick (1895) gives Devon without particulars, but on whose authority is not known, and the record is not confirmed from any other source to our knowledge.

Essex, Dorset and Herefordshire

Likewise there seem to be only old records for these counties. Thus C. W. Dale (1886) states that O. Pickard-Cambridge took it at Lulworth, apparently the sole record for Dorset. There is also only one record for Essex; W. Harwood (1903) writes: "*C. wockeella* is rare and has only been found at St Osyth".

For Herefordshire, T. Hutchinson (1887) lists the species without details, though J. H. Wood (1908) is more informative with "Haugh Wood, Herefordshire, scarce".

Sussex

There are two old localities for Sussex. W. H. B. Fletcher (1905) has: "Abbots Wood; abundant amongst *Stachys betonica* in a rough meadow; Guestling, very rare". To these a recent record can be added: at Heyshott, near Midhurst, the Rev. D. J. L. Agassiz took a single imago at an atinic fluorescent lamp on July 20, 1969 (D. J. L. Agassiz *in litt.* to A.M.E., 8.i.71).

Surrey

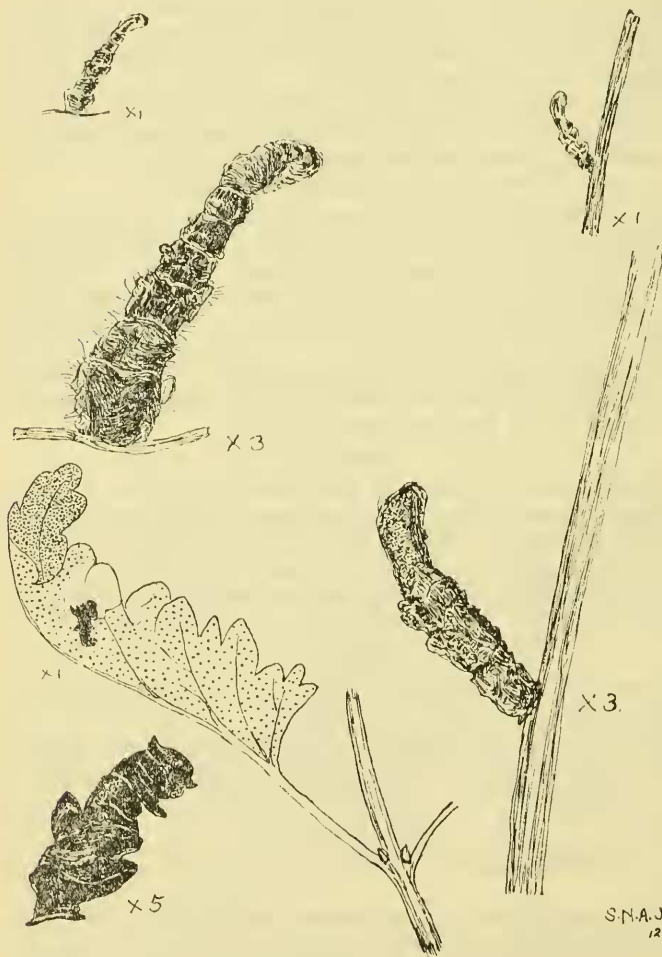
H. Goss and C. G. Barrett (1902) give: "Haslemere, very local, among wood betony".

L. T. Ford took a number of cases at Durfold in October 1933, from which he bred 32 imagines in 1934. He labelled these "Chiddingfold" (L. T. Ford *pers. comm.* to J.M.C.-H.; L. T. Ford coll. *per* D. J. Carter). R. M. Mere used to find *wockeella* occasionally in the light-trap he operated in his garden at Chiddingfold, *cir.* 1960 (R.M. Mere *pers. comm.* to A.M.E.).

R. Fairclough took a specimen in his light-trap at Leigh, near Reigate on July 14, 1964, though the foodplant is scarce in that neighbourhood (R. Fairclough *in litt.* to A.M.E., 27.iii.71).

Since the most plentiful recent records for *wockeella* came from the south-west corner of Surrey, we decided to search that area to see if it still occurred. Our first visit was rather a hurried one on November 2, 1969. We worked Durfold Wood

and Fisher Lane Wood, and J.M.C.-H. found two cases. He returned there on November 4, when he found 15 more. A.M.E. was unable to pay a second visit till November 13, when he found 17 cases in Fisher Lane Wood. The larvae were extremely local, occurring in small colonies (all A.M.E.'s cases were taken from only two plants). The larval feeding-places are conspicuous, and readily betray the whereabouts of the insect.



The larvae were kept on potted plants covered with nylon stocking supported by sticks. A few of the larvae retired to the base of the plant on the approach of winter, but the majority remained on the leaves or fixed themselves to stems for hibernation. The first post-hibernation feeding was noticed by

J.M.C.-H. on February 20, 1970, and by A.M.E. on February 22, although the pots containing his larvae had been under snow from the 12th to the 19th of that month. The larvae fed on the old leaves as well as the new growth. Whereas most seemed to prefer to feed from the underside of the leaf, a larva would sometimes feed from the upperside. A.M.E. placed one of his pots in a situation predominantly in sunshine, and the other predominantly in the shade; it made no difference to the survival or rate of growth of the larvae.

To fix for pupation, nearly all the larvae climbed to the tops of the sticks supporting the nylon covering, with the result that they tended to pupate gregariously. J.M.C.-H.'s moths (12 in number) emerged from 25. vi. to 20. vii. 70 and A.M.E.'s (14) from 2 to 8.vii.70. There were no parasites. The Surrey insects are mostly remarkably large, the majority having an alar expanse of 21-23 mm. On the other hand, J.M.C.-H. bred a very small one, with an expanse of only 17 mm. Two of Bankes' old Isle of Wight specimens in his possession measure only 18 mm. and 19 mm.

A field meeting of the British Entomological and Natural History Society was held at Durlford on November 8, 1970 to look for *wockeella*. The area where the cases had been found in 1969 proved unproductive, for only a single larva was taken, but Botany Bay Wood, a mile or so away, provided about 50 distributed amongst the party.

Our thanks are due to Mr S. N. A. Jacobs for the drawing of the larval cases made from the material collected on the field meeting just mentioned. The pre-hibernation case he reproduced from a drawing which he made from a case given to him by L. T. Ford.

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Notes on Some of the British Nepticulidae

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(Continued from p. 287)

SPIRAEA ULMARIA L. (Meadowsweet)

Nepticula ulmariae Hein. (Emmet, 1970) is a bivoltine species. My only opportunity to search for the first generation at Wicken Fen in 1970 was on a fleeting visit on the 28th of June, when the two or three mines which I found were already vacated. However, on three visits there between the 5th and 25th of September my companions and I found larvae in small numbers, and I have several cocoons overwintering. The larva is bright yellow with the dorsal vessel slightly darker; the head is light brown. The cocoons, which in captivity were spun between leaves, are brown.

Mr S. C. S. Brown (*in litt.*) writes: "You will be interested to hear that on the 20th of October I found the mines of *Stigmella ulmariae* Wocke in plenty in *Spiraea* just outside Basingstoke in a marsh beside the road. I should say I was a month late, as I gathered some thirty mines in a few yards and there was not one larva present. I could not find any mines that might have been of the July brood, so this species may have a very scarce first brood and a much commoner autumn one". Mr Brown's record is the first for the county of Hampshire.

ULMUS spp. (Elm)

Traditionally we have in Britain three Nepticulids on this foodplant, *Stigmella viscerella* Stt., *S. ulmivora* Fol. and *Nepticula marginicolella* Stt. To these the editor of the *Entomologist's Record* added a fourth, *S. ulmifoliae* Hering (Jacobs 1962) and later on Mr R. H. Richens recorded *ulmifoliae* again and introduced three further species, viz., *S. fulvomacula* Skala, *S. ulmicola* Hering and *S. ulmiphaga* Preisseker (now known as *ulmi* Skala) (Richens, 1963). The new species were identified from mines alone with the help of continental entomologists. The question arises whether we have as many as seven elm-feeding Nepticulids in this country. Let us consider their several claims.

(a) *Stigmella fulvomacula* Skala. This species is characterised by the mine, or part of it, being situated in a yellow fleck; the larva is yellowish. Borkowski (1969) states that he can detect no difference between the imagines of *fulvomacula*